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Magnon BEC Versus Atomic BEC

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Abstract

© 2016, Springer Science+Business Media New York.The Bose–Einstein condensation (BEC) corresponds to the formation of a collective quantum state in which macroscopic number of particles is governed by a single wave function. The magnon BEC, the coherent state of a macroscopic number of magnons, manifests itself by coherent precession of magnetization even in an inhomogeneous magnetic field. The magnon BEC has many similarities with the atomic BEC. But it shows a great variety of properties in different magnetic materials. Here we will classify the different types of magnonic BECs.

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Keywords

BEC of quasi-particles, Non-linear NMR, Spin superfluidity